

REMARKS

At the outset, Applicant and the undersigned attorney would like to thank the Examiner, Sharon Polk, and her supervisor, Brian Sircus, for the courtesy shown during the personal interview of October 1, 2003. In view of the discussions during the interview, the claims have been amended both to further clarify the distinctions between the claimed invention and the prior art and to overcome the rejection under 35 U.S.C. 112, second paragraph that is set forth in the Office Action. A detailed discussion of the claim amendments is presented below as each section of the Office Action is addressed.

An Information Disclosure Statement is being filed concurrently herewith that cites numerous references that have been cited in Applicant's related patents and applications, both domestic and foreign. As Mr. Blake discussed with Ms. Polk during a telephone conversation on November 6, 2003, copies of the U.S. patent references are not being enclosed herewith, though copies of the foreign references and English language abstracts, where necessary, are enclosed.

A proposed drawing correction is submitted herewith that makes minor corrections to FIG. 1. As discussed beginning on page 18, line 17 of the published PCT application, the second switch 110 is provided that acts opposite to the switch 102 in that closure of the switch 110 causes the microchip 103 to interrupt power to the load 105. As originally drawn, the switch 110 is shown in parallel to the switch 102, which would prevent the switch 110 from operating as disclosed. Applicant respectfully submits that it is clear from the description in the application, that the left side of switch 110 should be connected separately to the microchip 103 and not to the left side of the switch 102 as shown in original FIG. 1. To correct this obvious inconsistency, a revised FIG. 1 is submitted herewith that makes this proposed change in red and conforms the

conforms the drawing to the description in the application. Thus, no new matter is being presented in the drawing. Upon approval of the drawing change, a formal version thereof will be submitted.

Turning now to the Office Action, in section 3 thereof, claims 51-86 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite. This rejection was discussed during the interview and Applicant agreed to clarify the relationship among the system, microchip and electronic circuit recited in the claims. To this end, claims 51, 58, 61, 63, 72 and 80 have each been amended to specify that the invention is an electronic system for use with an exhaustible power source, an energy consuming load and a power switch that includes a microchip having an input that receives a signal indicating when the load has been activated or deactivated. The change in language clearly overcomes the confusion regarding the microchip's input functionality. The use of the term "circuit" has also been replaced by "system" and the elements have been rearranged in most of the independent claims to clarify what is and is not part of the system. Applicant respectfully submits that the changes overcome the section 112, second paragraph rejection.

As a result of the foregoing, claims 63-65, 69 and 72-94 are clearly allowable over the prior art of record since the Examiner indicated the allowability of the subject matter of claims 63, 72 and 84-86. In this regard, claim 80 has been amended to incorporate the limitation of the previous version of claim 86, while claim 84 has been rewritten as an independent claim that is similar, though slightly broader in scope than claim 72. In particular, claim 84 differs from claim 72 in that element (d) is broadened to recite any two of the three listed parameters. Similarly, claim 90 is a slightly broader version of claim 80 in that element (d) only recites the find-in-the-

that this claim is patentable like claim 80 because of the recitation of element (c) regarding control of reduction of power to the load. The various dependent claims patentably distinguish the invention further over the prior art as discussed below in conjunction with the prior art rejections.

In section 4 of the Office Action, claims 51, 57, 72 and 75 stand rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1, 12, 13 and 15 of U.S. Patent No. 6,249,089. This rejection is hereby overcome by the submission of the attached terminal disclaimer. As was also discussed during the personal interview, another related patent has recently issued to Applicant, this being U.S. Patent No. 6,621,225, which issued on September 16, 2003. Since that time, yet another related patent has issue, this being U.S. Patent No. 6,650,066, which issued on November 18, 2003. To avoid further delays in the subject application's prosecution, two additional terminal disclaimers are attached hereto which reference the '225 patent and the '066 patent, respectively. For the record, the three issued patents and the subject application are now commonly owned.

Turning now to the art rejections set forth in the Office Action, claims 51, 54, 57, 58, 61, 62 and 80-83 stand rejected under 35 U.S.C. 103 as being unpatentable over U.S. Patent 5,645,341 to Liao in view of U.S. Patent Nos. 5,806,961 to Dalton and 4,876,632 to Osterhout, et al. In addition, claims 52, 55, 59 and 81 stand rejected over the foregoing combination of references and further in view of U.S. Patent No. 4,074,252 to Keller. Finally, claims 53 and 82 stand rejected over the foregoing combination of references and further in view of U.S. Patent No. 5,942,770 to Ishinaga et al. Applicant respectfully submits that these rejections are hereby traversed in view of the following reasons.

No. 5,942,770 to Ishinaga et al. Applicant respectfully submits that these rejections are hereby traversed in view of the following reasons.

At the outset, one of the key features of the subject invention is the provision of a power level indicator that operates when a load is not energized. An exemplary application of the subject invention is in a portable flashlight. When not in operation, low power light sources, such as LEDs, provide an indication as to the level (condition) of the battery or other exhaustible power source and can also act as a find-in-the-dark location indicator. The key is that these indicators are activated when the load is not activated so that a user can find the flashlight and immediately determine without even turning the flashlight on, whether the exhaustible power source has adequate energy to power the flashlight.

As to this feature alone, it is clear that the combination of teachings in the Liao, Dalton and Osterhout references do not establish a prima facie case of obviousness under 35 U.S.C. 103 as to any of the rejected claims, for the combination, even if proper, fails to disclose all of the key elements of the claims. In particular, contrary to the assertion in the Office Action, Osterhout discloses a power source level indicator that works only when the load is activated and not when the load is deactivated. Osterhout specifically notes that this mode or operation prevents the batteries from being drained when the flashlight is not being powered (see, e.g. column 2, lines 37-43 and column 3, lines 41-45). Thus, Osterhout actually teaches away from the claimed invention. It should be noted in this regard that battery drain for operation of the various indicators in the claimed invention would also be a problem but for use of the microchip control, which minimizes battery drain through facilitation of a low duty cycle periodic power signal to the power level indicator.

Even though the combination of Liao, Dalton and Osterhout fail to establish a prima facie case of obviousness, Applicant has nonetheless amended claims 51, 58 and 61 to specify further that the electronic system components are contained in the same housing as the power source, load and switch, thereby distinguishing the claims further over the Liao patent. As discussed during the interview, Liao discloses use of a microchip for controlling supply of AC mains power to a portable flashlight when the flashlight is inserted in a wall mounted receptacle. However, the microchip in Liao is not contained in the flashlight housing itself, nor does it serve the same control function as the microchip recited in the various rejected claims, such as control of the various indicators. For these reasons also, Applicant respectfully submits that the prior art rejections are traversed.

The various dependent claims add other significant elements that further distinguish the invention over the prior art. For example, contrary to the assertions set forth in the Office Action, the Keller reference fails to disclose or suggest the features recited in claims 52, 55, 59, and 81, while Ishinaga fails to disclose the feature recited in claim 53 and 82.

In particular, claims 52, 55, 59 and 81 as amended each recite that the microchip is configured to change the activation/deactivation sequence of the indicators or indicator functions, depending on the operating mode of the system. Keller merely discloses a hand held flasher in which a conventional make and break flasher unit 40 controls flashing of a flashlight. There is absolutely no disclosure or suggestion in Keller of modifying an activation/deactivation sequence of the flashlight depending on an operating mode of the system, nor is there any disclosure or suggestion of controlling a flashing sequence with a microchip. Instead, Keller merely discloses a flashlight that flashes when it is turned on and does nothing when it is turned off, which is to

Claims 53 and 82 recite that the find-in-the-dark and power source level indicators or indicator functions are combined, which means that the two recited functions are indicated by the same indicator or indicators. Ishinaga merely discloses a combined pair of LEDs, but makes absolutely no suggestion that multiple functions could be indicated by the LEDs. Thus, only through the impermissible use of hindsight through reference to Applicant's own disclosure, would one of ordinary skill in the art be motivated to use Ishinaga's LEDs in the recited manner. For this reason also, the rejection of claims 53 and 82 are traversed.

Finally, with regard to claims 54, 55, 57, 60, 62 and 83, the Examiner states that Liao teaches an automatic delayed shut-off function. Contrary to the Examiner's statement, the auto shut-off function in Liao is not in response to an activation signal by a user (activating/deactivating user interface) but rather in response to the failure of the mains supply i.e. a change in the charging state of the unit (see column 3 lines 33 to 35). Thus, for these reasons also, claims 54, 55, 57, 60, 62 and 83 are patentable.

In view of the foregoing, Applicant respectfully submits that the amended and newly submitted claims are patentable over the references of record and that the application is now in

condition for allowance. Accordingly, reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,

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